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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 17

Application Number	10/772,916
Filing Date	02/05/2004
First Named Inventor	Fumiaki Oba et al.
Art Unit	3632
Examiner Name	A.J. Wujciak
Attorney Docket Number	TWA97USA

ENCLOSURES *(Check all that apply)*

- [✓] Fee Transmittal Form
  - [✓] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
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- [ ] CD, Number of CD(s) _____
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- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [✓] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary information
- [ ] Status Letter
- [✓] Other Enclosure(s) (please Identify below):
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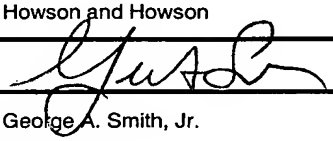
Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Howson and Howson		
Signature			
Printed name	George A. Smith, Jr.		
Date	06/15/2006	Reg. No.	24,442

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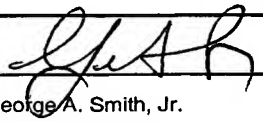
Signature			
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PTO/SB/17 (01-06)
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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2006

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($)	500.00

Complete if Known	
Application Number	10/772,916
Filing Date	02/05/2004
First Named Inventor	Fumiaki Oba et al.
Examiner Name	A.J. Wujciak
Art Unit	3632
Attorney Docket No.	TWA97USA

METHOD OF PAYMENT (check all that apply)

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1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		Small Entity		Small Entity		Small Entity	
Application Type	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims		Extra Claims		Fee ($)		Fee Paid ($)
_____	- 20 or HP =	_____	x	_____	=	_____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims		Extra Claims		Fee ($)		Fee Paid ($)
_____	- 3 or HP =	_____	x	_____	=	_____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims	
Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		Extra Sheets		Number of each additional 50 or fraction thereof		Fee ($)		Fee Paid ($)
_____	- 100 =	_____	/ 50 =	_____	(round up to a whole number) x	_____	=	_____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge): Brief on Appeal	$500.00

SUBMITTED BY			
Signature		Registration No. (Attorney/Agent) 24,442	Telephone 215-540-9200
Name (Print/Type)	George A. Smith, Jr.		Date 06/15/2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.: 10/772916
Applicant: Fumiaki Oba et al.
Filed: 02/05/2004
TC/A.U.: 3632
Examiner: A. J. Wujciak
Docket No.: TWA97USA
Customer No. 00270

Confirmation No: 5242

BRIEF ON APPEAL

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UNDER 37 C.F.R. §1.8(a)(1)(ii)
(PATENT)
I certify that this paper is being deposited on the date shown below with the United States Postal Service, with sufficient postage, as first class mail and is addressed to "Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450."
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Date: June 15, 2006

MAIL STOP Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is from the final rejection of claims 1-17 in the Office Action dated March 10, 2006.

A check for the fee of $500.00 for filing this Appeal Brief is attached. The Commissioner is hereby requested to charge any deficiency in the fee due with the filing of this paper, or credit any overpayment, to our Deposit Account, No. 08-3040.

The notice of appeal was filed April 24, 2006. This brief is therefore timely. However, please grant an extension of time if necessary, and charge any extension fee to the above-mentioned deposit account.

I. REAL PARTY IN INTEREST

The real party in interest is the Applicant's Assignee, Tsubakimoto Chain Co., a Japanese corporation located at Osaka Fukokuseimei Building 2-4, Komatsubara-cho, Kita-ku, Osaka 530-0018, Japan. Tsubakimoto Chain Co. acquired title from the inventors by an assignment recorded at Reel 014993 frame 0894.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

The pending claims are claims 1-21. Claims 18-21, which were not elected following a restriction requirement, are withdrawn. Each of claims 1-17 has been rejected. This appeal is from the final rejection of all of claims 1-17.

IV. STATUS OF AMENDMENTS

No amendment was filed following the final rejection.

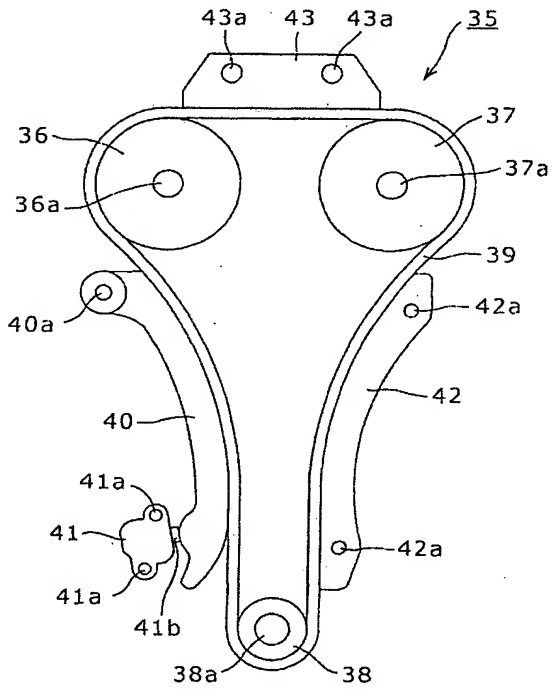
V. SUMMARY OF CLAIMED SUBJECT MATTER

The process of assembly of a mechanism can be expedited, and assembly errors can be avoided, by supplying sets of parts on parts-retaining panels. The parts are arranged on the retaining panel in the same relationship to one another as when finally mounted on the mechanism.

The invention is described in the context of the timing drive of a DOHC (dual overhead cam) internal combustion engine. Referring to FIG. 9, a typical timing drive comprises

a crankshaft sprocket 38, two camshaft sprockets 36 and 37, a drive chain 39, a pivotable chain tensioner lever 40, a tensioner 41, having a plunger 41b cooperating with the lever 40, and fixed chain guides 42 and 43.

Fig.9



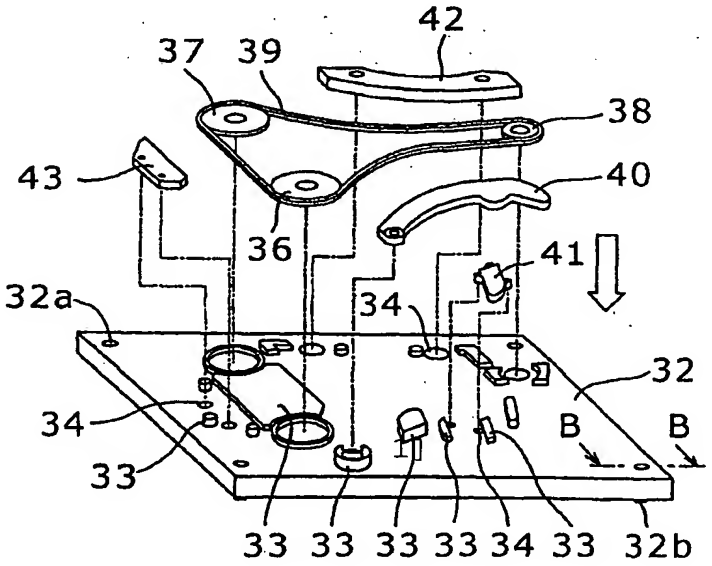
Each of the several parts must be properly mounted and secured at the appropriate position on the engine. (Paragraph 0004, p. 2., lines 4-6). When the timing drive is assembled in the conventional manner, that is, when the parts are selected individually from a parts supply, and attached to the engine block, it is possible for a worker to forget to mount a

particular part or to mount a wrong part (Paragraph 0050, p. 11, lines 31 and 32).

Providing preassembled sets of parts on a retainer is known. For example, Sosson U.S. patent 4,770,399 describes a device referred to as a "print" or "packing," composed of a rigid polyethylene foam block (Sosson, FIGs. 2, 3 and 4) or a thermoformed sheet (Sosson, FIGs. 7, 8 and 9). Sosson's "print" has cavities in which the various components of a timing drive are fitted.

As shown in FIG. 1, in the Applicant's invention, the various timing drive parts, such as the sprockets 36, 37 and 38, the timing chain 39, the pivoted tensioner lever 40, the tensioner 41 and the fixed guides 42 and 43 are temporarily held, by retainers 33, on the front of the panel 32 in the same cooperative relationship with one another that they will be in when mounted on the engine block.

Fig.1



Each of the panels is provided with a plurality of legs 32b, as shown in FIG. 8. These legs enable the parts retaining panels 32 to be stacked, in the manner depicted in FIG. 2, for easy storage and transport (Paragraph 0045, page 10, lines 26-30).

Fig.2

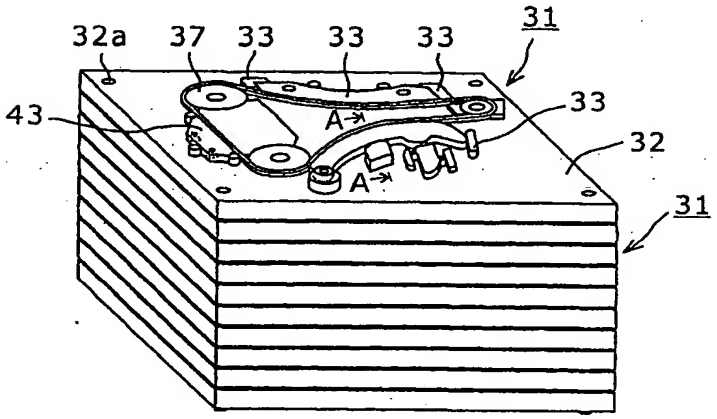
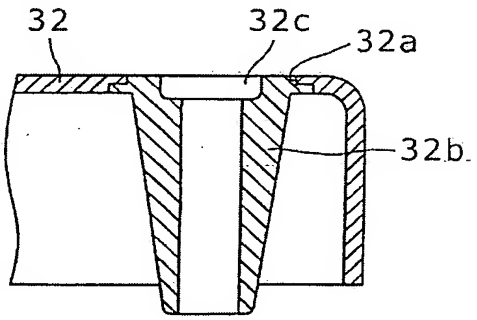


Fig.8



The legs, and their situation on the side of the panel opposite from the side on which the parts are mounted, are the principal features that distinguish Applicants' parts-retaining panel from that of Sosson. The legs cooperate with a next panel to establish a space which accommodates the parts on the next panel, thereby eliminating the need for cavities. These distinguishing features are defined by the following specific language in claim 1:

"a parts-retaining panel, having a front side and a rear side facing in opposite directions. . .

"parts. . . removably retained on the front side of said parts-retaining panel. . .

"said panel being removable from said parts by movement of the panel, in the direction in which the rear side faces . . .

"a plurality of legs extending from said rear side in the direction in which said rear side faces. . .

"said legs being substantially entirely rearward of said retained parts. . .

"and [said legs] being of sufficient length. . . to establish a hollow space between said panels sufficient to accommodate an identical set of parts retained on [an]. . . adjacent panel.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

There is only one ground of rejection. Claims 1-17 are rejected under 35 U.S.C. §103(a) as unpatentable over Sosson et al. 4,770,399 in view of Calfee 5,685,441.

VII. ARGUMENT

The prior art consists of Sosson, which discloses two embodiments of a parts-retaining panel, each having parts-retaining cavities, and Calfee, which discloses a video monitor support composed of plural, identical, legged pedestal

members stacked one upon another. In Calfee, the legs maintain the horizontal parts of the pedestal members in spaced relationship, thereby providing "pockets" into which various articles such as computer discs, loose papers, files and the like can be inserted.

In the rejection under §103(a), the Examiner asserts that, "It would have been obvious for one of ordinary skill in the art at the time the invention was made to have added legs to Sosson et al.'s panel as taught by Calfee to provide support for the panel to maintain in upright direction when mounted on the other panel and provide clearance between the two panels when the parts are retained in the panels."

We submit that the invention as claimed is not shown to have been obvious by Sosson et al. and Calfee.

Sosson discloses two different types of parts-carrying "print," and the issue of whether or not Sosson and Calfee demonstrate that the Applicants' invention would have been obvious has two different aspects, depending on which of Sosson's embodiments is relied upon. In the first embodiment, the "prints" are thick foam blocks and are stackable without modification. Therefore there is no motivation to provide legs. In Sosson's second embodiment, the prints are thermoformed sheets, and, depending on the sizes of the thermoformed parts-receiving cavities, the sheets may not be readily stackable. However, even if legs were provided to make the thermoformed sheets stackable, the result would not conform to the Applicant's claims.

(a) The foam blocks in Sosson's first embodiment are stackable without modification and there is therefore no motivation to provide legs

In the first embodiment, shown in Sosson's FIGs. 2, 3 and 4, the parts are accommodated in recesses in a thick foam panel. The thick panels in Sosson are stackable because each of the two faces of the panel is in the form of a planar surface, one being interrupted only by parts-receiving recesses and the other being interrupted only by openings through which fasteners can be inserted to secure the parts to an engine.

The Examiner disagreed with the Applicant's assertion that Sosson needed no modification to be stackable, stating that "in order to stack up Sosson's panels legs need to be added to provide some clearance for the parts between the two panels." The Examiner pointed out that "Figure 2 in Sosson's invention shows at least one parts (11) is extending outward of the panel and that if stacked up without using the legs from Calfee's invention, the panels would not sit evenly on each other."

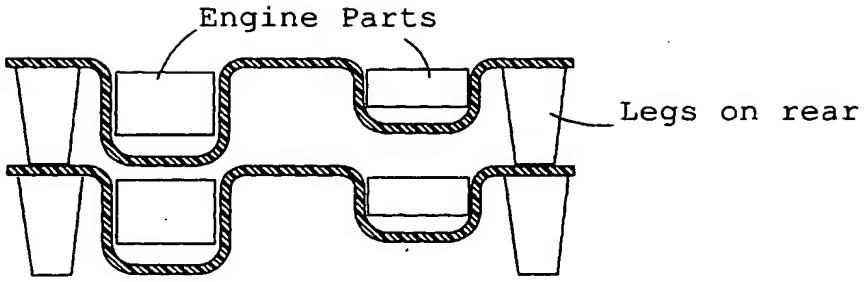
Applicant still maintains that Sosson's panels in FIGs. 2, 3, and 4 are stackable without modification. The part 11, to which the Examiner refers as "extending outward of the panel" is a screw used to secure a "pinion" (sprocket) 3 to a crankshaft 23. The screw is not one of the elements of the pre-assembled set of elements mounted on the "print" 1 when the print is carried to the engine block. Rather, element 11 is inserted later by a robot that simultaneously carries out screwing operations (Sosson et al., col. 4, lines 2). There are two reasons for this conclusion. First, the screw 11 and the camshaft 23 are both shown in broken lines, indicating that they are not part of the assembly carried on the print 1. Secondly, the screw 11 is supported by being threaded into the

end of the crankshaft. It could not present in the position depicted in Sosson's FIG. 2 when the print is carried to the engine block because the crankshaft is in the engine block. There would be nothing to hold the screw.

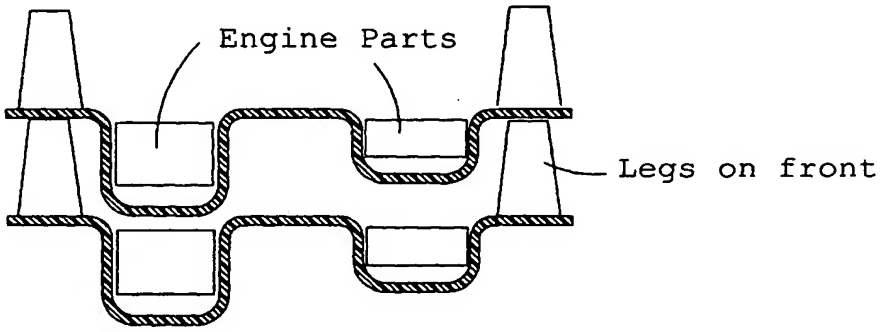
The erroneous interpretation of Sosson is the only support in the final Office action for the Examiner's conclusion that Sosson's FIG. 2, 3 and 4 embodiment needs legs. However, at least in the case of Sosson's FIGs. 2, 3 and 4, there is no need for legs, and therefore no motivation to modify Sosson's prints by taking teachings of Calfee into account.

(b) Even if a person skilled in the art were to modify Sosson's FIG. 7, 8 and 9 embodiment by providing legs, the result would not correspond to the Applicant's claims.

Sosson says nothing about stacking of either the thick foam print or the print composed of a thermoformed sheet. As pointed out above, the thick foam prints are stackable. The same may not be true of Sosson's thermoformed sheets. While in FIG. 7, the height of the crankshaft sprocket recess 3a appears to be the same as the height of the chain recess (at the location of the camshaft sprocket), the heights of some of the other recesses differ. For example, the heights of the two recesses in FIG. 8 appear to be slightly different from each other, as do the heights of the two recesses in FIG. 9. Assuming that the differing heights of the recesses would impair the stackability of the thermoformed sheets, providing legs to make the sheets stackable would not result in an assembly conforming to the Applicants' claim 1. The reason can be readily seen from the following diagrams, which show the two possible ways to provide legs on Sosson's panels in a manner consistent with Calfee.



In the first case, shown above, the legs extend from the rear side of the panel, but are not "substantially entirely rearward of said retained parts." In order for the legs of Calfee to be incorporated into the panels of Sosson so as to extend substantially rearward of the retained parts, the cavities of Sosson's panels would need to be eliminated. Neither Sosson, nor Calfee suggests such a reconstruction of Sosson's panels.



In the second case, shown above, the legs extend from the front side, and are not "extending from said rear side in the direction in which said rear side faces," as required by claim 1.

(c) Conclusion

A person skilled in the art, seeking to improve the Sosson engine component mounting panel, would not perceive a problem with Sosson's thick foam panel embodiment for which Calfee offers a solution. In the case of Sosson's thermoformed sheet embodiment, even if a person skilled in the art were to look to the art of knockdown supports and racks, and apply Calfee's teachings, the result would not correspond with the Applicant's claims. Thus, to combine Sosson and Calfee in order to find the Applicant's claimed subject matter to have been obvious is not warranted by anything in their teachings. The rejection under 35 U.S.C. §103 should be reversed.

Respectfully submitted,
HOWSON & HOWSON

By _____
George A. Smith, Jr.
Reg. No. 24,442
Howson & Howson
510 Office Center Drive
Fort Washington, PA 19034
Telephone: 215 540 9200
Facsimile: 215 540 5818

Enclosure:
(a) appeal fee

CLAIMS APPENDIX

1. An assembly comprising a parts-retaining panel, having a front side and a rear side facing in opposite directions, and a set of cooperating parts for a mechanism, said parts being removably retained on the front side of said parts-retaining panel in the same positions relative to one another as the positions of said parts relative to one another when in operative relationship in said mechanism, said panel being removable from said parts by movement of the panel, in the direction in which the rear side faces, when the parts are mounted in operative relationship in said mechanism, in which said panel has a plurality of legs extending from said rear side in the direction in which said rear side faces, said legs being substantially entirely rearward of said retained parts, being engageable with an adjacent, identical, panel, and being of sufficient length to maintain said panels in spaced relationship to each other when stacked, and to establish a hollow space between said panels sufficient to accommodate an identical set of parts retained on said adjacent panel.

2. An assembly, according to claim 1, in which said set of cooperating parts consists of parts for a timing drive of an internal combustion engine, said parts being removably retained on said parts-retaining panel in the same positions relative to one another as the positions of said parts relative to one another when in operative relationship in said engine, said panel being removable from said parts when the parts are mounted in operative relationship in said engine.

3. An assembly according to claim 2, in which said parts-retaining panel includes a plurality of retainers protruding from said front side thereof, said retainers

holding said parts on the panel, and in which said panel also includes a plurality of through holes through which fasteners for securing said parts to the engine can be inserted.

4. An assembly according to claim 2, in which said parts are retained on said panel in the same cooperative relationship to one another as when in operative relationship in said engine.

5. An assembly according to claim 3, in which said parts are retained on said panel in the same cooperative relationship to one another as when in operative relationship in said engine.

6 An assembly according to claim 1, in which said panel has a plurality of corners, and in which each of said legs is positioned at one of said corners.

7. An assembly according to claim 2, in which said panel has a plurality of corners, and in which each of said legs is positioned at one of said corners.

8 An assembly according to claim 3, in which said panel has a plurality of corners, and in which each of said legs is positioned at one of said corners.

9 An assembly according to claim 4, in which said panel has a plurality of corners, and in which each of said legs is positioned at one of said corners.

10 An assembly according to claim 2, in which said panel is recyclable.

11 An assembly according to claim 3, in which said panel is recyclable.

12 An assembly according to claim 4, in which said panel is recyclable.

13 An assembly according to claim 5, in which said panel is recyclable.

14 An assembly according to claim 6, in which said panel is recyclable.

15 An assembly according to claim 7, in which said panel is recyclable.

16 An assembly according to claim 8, in which said panel is recyclable.

17 An assembly according to claim 9, in which said panel is recyclable.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None